

Before the
Federal Communications Commission
Washington, D.C. 20554

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AirTouch Satellite Services US, Inc.)	
)	File No. 1367-DSE-P/L-97
Blanket authority for operation of up to 500,000)	
Mobile Satellite System earth terminals through)	
the GLOBALSTAR Mobile Satellite System)	
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MEMORANDUM OPINION AND ORDER

Adopted: June 17, 2002

Released: June 18, 2002

By the Chief, International Bureau:

I. Introduction

1. In this order we deny a petition by the U.S. GPS Industry Council (“USGPS”) for reconsideration of an order that granted blanket authority to Globalstar USA, Inc. for operation of up to 500,000 mobile earth stations for use with the GLOBALSTAR Mobile Satellite Service system (“*Blanket License Order*”).¹ Mobile terminals operating under the blanket license transmit on assigned frequencies between 1610 MHz and 1621.35 MHz.

II. Background

2. Globalstar USA indicated in its license application that the e.i.r.p.² spectral density of out-of-band emissions from GLOBALSTAR mobile terminals placed in service after January 1, 2002 would not exceed –70 dBW/MHz anywhere in the 1559-1605 MHz band, a band allocated domestically and internationally for aeronautical and satellite radionavigation. The applicant also represented that the e.i.r.p. spectral density of emissions from GLOBALSTAR mobile terminals placed in service *before* January 1, 2002 would not exceed –70 dBW/MHz in the 1559-1580.42 MHz band or –64 dBW/MHz in the 1580.42-1605 MHz band and that any such terminals kept in service after January 1, 2005 would meet the –70 dBW/MHz limit throughout the 1559-1605 MHz band. Those specifications were consistent with limits that the Commission had proposed to adopt in a pending rulemaking proceeding in order to prevent

¹ *AirTouch Satellite Services US, Inc.* (Order and Authorization), DA 99-2010, 14 FCC Rcd 17328 (Int’l Bur. 1999). Licenses for mobile terminals used with Big LEO systems, such as the GLOBALSTAR system, are issued to service providers, rather than to end users. End users operate the mobile terminals under derivative authority from the blanket licensees and may not transmit without prior permission from the satellite licensee or authorized service provider. See 47 C.F.R. §§ 25.115(d) and 25.136 (2001).

² “E.i.r.p.” is a conventional abbreviation for Equivalent Isotropically Radiated Power, which is the product of the power supplied to a transmitting antenna and its gain in a given direction relative to that of an isotropic antenna. See 47 C.F.R. § 2.1 (2001).

interference with aircraft reception of satellite radionavigation signals.³

3. USGPS argued in a petition to deny, however, that the emission limits specified in the application would not suffice to prevent interference with reception of GPS satellite radionavigation signals by ground-based receivers. USGPS also contended that Globalstar's proposed interim limit of –64 dBW/MHz on emissions in frequencies above 1580.42 MHz, for terminals placed in service before 2002, was inconsistent with a recommendation of the International Telecommunication Union ("ITU"), Rec. M.1343.⁴ According to USGPS, Rec. M.1343 called for immediate adoption of a –70 dBW/MHz limit on emissions everywhere within the 1559-1605 MHz band, not just in frequencies below 1580.42 MHz.

4. The International Bureau overruled those objections in the *Blanket License Order*. The Bureau held that USGPS had not shown that GLOBALSTAR terminals operating within the limits specified in the application would crucially interfere with ground-based GPS reception, particularly in a way that would impair public safety.⁵ Regarding the alleged inconsistency with the ITU standard, the Bureau pointed out that, on the contrary, the applicant's proposed interim specifications were in accordance with M.1343's recommendation that mobile earth terminals using a signal modulation technique of the type used by Globalstar should meet a limit of –70 dBW/MHz in frequencies from 1559 MHz to 1580.42 MHz.⁶ The Bureau accordingly granted the application, subject to conditions requiring compliance with the emission limits that the application specified. The Bureau stressed, however, that if the Commission were to adopt stricter emission limits in the pending rulemaking proceeding in Docket No. 97-67 the blanket licensee would be obliged to comply with them.⁷

5. In its petition for reconsideration, USGPS contends that the Bureau erred in granting authority for terminals placed in service before 2002 to operate temporarily with out-of-band emission levels higher than –70 dBW/MHz in frequencies above 1580.42 MHz. USGPS maintains that it presented an "irrefutable" showing in Docket No. 99-67 that out-of-band emissions from mobile terminals at any e.i.r.p. level above –70 dBW/MHz can harmfully interfere with operation of non-aeronautical GPS receivers.⁸ According to USGPS, GLOBALSTAR mobile terminals producing emissions up to 6 dB stronger than –70 dBW/MHz in frequencies above 1580.42 MHz, as temporarily permitted by the *Blanket License Order*, would have a "devastating impact," because many terrestrial and maritime GPS receivers have a reception bandwidth extending from 1565.19 MHz up to 1585.65 MHz.⁹ USGPS still maintains, moreover, that the interim limit specified in the *Blanket License Order* is inconsistent with ITU Rec.

³ See *Amendment of Parts 2 and 25 to Implement the Global Mobile Personal Communications by Satellite (GMPCS) Memorandum of Understanding and Arrangements and Petition of the National Telecommunications and Information Administration to Amend Part 25 of the Commission's Rules to Establish Emissions Limits for Mobile and Portable Earth Stations Operating in the 1610-1660.5 MHz Band* (Notice of Proposed Rulemaking), FCC 99-37, IB Docket No. 99-67, 14 FCC Rcd 5871 (1999).

⁴ RECOMMENDATION ITU-R M.1343, *Essential Technical Requirements of Mobile Earth Stations for Global Non-Geostationary Mobile-Satellite Service Systems in the Bands 1-3 GHz* (1997).

⁵ *Blanket License Order* at ¶13.

⁶ *Id.* at ¶16.

⁷ *Id.* at ¶18.

⁸ See Comments of the U.S. GPS Industry Council in IB Docket No. 99-67, at 11-17 and Attachment 1 (filed June 21, 1999).

⁹ Although the "C/A" code sequence typically processed by civilian GPS receivers occupies only 2 MHz of spectrum centered on the "L1" carrier frequency of 1575.42 MHz, USGPS maintains that many GPS receivers in civilian use also process the GPS "Y" code signal, which occupies a bandwidth of 20.46 MHz centered on the L1 carrier, to achieve greater accuracy.

M.1343. USGPS therefore argues that the Bureau's acceptance of the interim limit could be prejudicial to future U.S. efforts to promote international agreement on technical standards for global satellite services. For these reasons, USGPS asks us to revise the license terms so as to require all GLOBALSTAR mobile terminals, regardless of when placed in service, to meet immediately the -70 dBW/MHz limit in all frequencies from 1559 MHz to 1605 MHz.

6. Globalstar USA and an affiliated company, Globalstar L.P., filed oppositions to the petition for reconsideration, contending that it fails to demonstrate that the *Blanket License Order* was materially erroneous or that grant of the application as conditioned disserves the public interest.

7. After the filing of the pleadings at issue here, the Commission issued a report and order in Docket No. 99-67, adopting a new rule section¹⁰ that prescribes out-of-band emission limits for mobile earth stations, such as Globalstar's, with assigned uplink frequencies between 1610 and 1660.5 MHz.¹¹ Among other things, Section 25.216 requires terminals placed in service after July 21, 2002 to suppress emissions in the 1559-1605 MHz band to e.i.r.p. levels of -70 dBW/MHz or less and requires terminals placed in service before that date to suppress emissions to levels of -70 dBW/MHz or less in frequencies from 1559 to 1587.42 MHz.¹²

III. Discussion

8. The Commission's adoption of the new emission rule renders the USGPS petition for reconsideration largely moot. By its terms, the blanket license for GLOBALSTAR mobile terminals is subject to any applicable out-of-band emission restriction adopted in the Docket 99-67 rulemaking for the purpose of protecting aeronautical radionavigation.¹³ The Commission adopted Section 25.216 in that proceeding for that purpose.¹⁴ Hence the blanket license now incorporates the applicable out-of-band emission limits in Section 25.216. As of its effective date,¹⁵ Section 25.216 prohibits further operation of any mobile earth station with assigned uplink frequencies between 1610 and 1660.5 MHz placed in service prior to July 21, 2002 if the earth station's e.i.r.p. exceeds -70 dBW/MHz in frequencies between 1559 MHz and 1587.42 MHz. The petitioner's request for modification of the GLOBALSTAR blanket license to require terminals placed in service before January 1, 2002 to meet immediately a limit of -70 dBW/MHz throughout the 1559-1605 MHz band is therefore moot insofar as it pertains to emissions in frequencies below 1587.42 MHz.

9. It remains to consider the portion of the petitioner's reconsideration request that is *not* moot – *i.e.*, its request that we alter the terms of the GLOBALSTAR blanket license to require terminals placed in service before 2002 to meet immediately a limit of -70 dBW/MHz in frequencies from 1587.42 MHz to 1605 MHz. USGPS has not presented any valid reason for granting such relief. It has argued

¹⁰ 47 C.F.R. § 25.216.

¹¹ *Amendment of Parts 2 and 25 to Implement the Global Mobile Personal Communications by Satellite (GMPCS) Memorandum of Understanding and Arrangements and Petition of the National Telecommunications and Information Administration to Amend part 25 of the Commission's Rules to Establish Emissions Limits for Mobile and Portable Earth Stations Operating in the 1610-1660.5 MHz Band* (Report and Order and Further Notice of Proposed Rulemaking), FCC 02-134, released May 14, 2002 (“*Out-of-Band Emissions Order*”).

¹² *Id.*, Appendix A.

¹³ *Blanket License Order* at ¶26.

¹⁴ *See Out-of-Band Emissions Order* at ¶1.

¹⁵ The rule will take effect thirty days after publication of the *Out-of-Band Emissions Order* in the Federal Register.

that reconsideration is warranted on two grounds: 1) that there is a need to provide immediate protection for GPS reception in frequencies from 1565.19 MHz through 1585.65 MHz, and 2) that there is a discrepancy between the terms of Globalstar's blanket license and ITU Rec. M.1343. The adoption of the new out-of-band emissions rule has effectively mooted the contention regarding protection in the 1565.19-1585.65 MHz band, as we have already explained. The second asserted reason for granting relief is baseless. Contrary to the petitioner's assertions, ITU Rec. M.1343 neither says nor implies that mobile terminals using the type of signal modulation used by the GLOBALSTAR system should be subject to a limit of -70 dBW/MHz on emissions between 1580.42 MHz and 1605 MHz. Rather, the Recommendation simply does not specify a limit for emissions from such terminals in that frequency range.¹⁶ Thus, the assertion that the interim limits prescribed in the *Blanket License Order* are inconsistent with ITU REC. M.1343 is incorrect.

IV. Conclusion

10. The petition for reconsideration is moot insofar as it pertains to emissions in frequencies below 1587.42 MHz and unsupported insofar as it pertains to emissions in frequencies above 1587.42 MHz. We therefore deny the petition.

V. Ordering Clauses

11. Accordingly, IT IS ORDERED that the Petition for Reconsideration filed by the U.S. GPS Industry Council on November 3, 1999 IS DENIED.

FEDERAL COMMUNICATIONS COMMISSION

Donald Abelson
Chief, International Bureau

¹⁶ The ITU Radiocommunication Assembly explained in a footnote that determination of an appropriate limit, or limits, for CDMA terminals (such as Globalstar's) in frequencies between 1580.42 MHz and 1610 MHz is a matter requiring further study. ITU Rec. M.1343, Table 7, n.4. The Assembly recommended that the study be carried out expeditiously, but to date there is no ITU recommendation for limits on emissions from CDMA terminals in the 1580.42-1610 MHz frequency range. In the same footnote, the Assembly said that it would not recommend a limit *lower* than (*i.e.*, more strict than) -70 dBW/MHz for emissions from such terminals in that frequency range, leaving open the possibility that the recommendation might be more lenient.